The "TITAN" Project

"Totally Integrated Technical Aircraft Network"

Revised

05/03/2001

Bob Bouchard

For questions related to TITAN:
Contact Bob Bouchard, **rkbouchard@fedex.com**, (901)224-4666
3131 Democrat Road, Memphis, TN, 38118

SPIRENT Systems
"Focused on the Business of Flight"

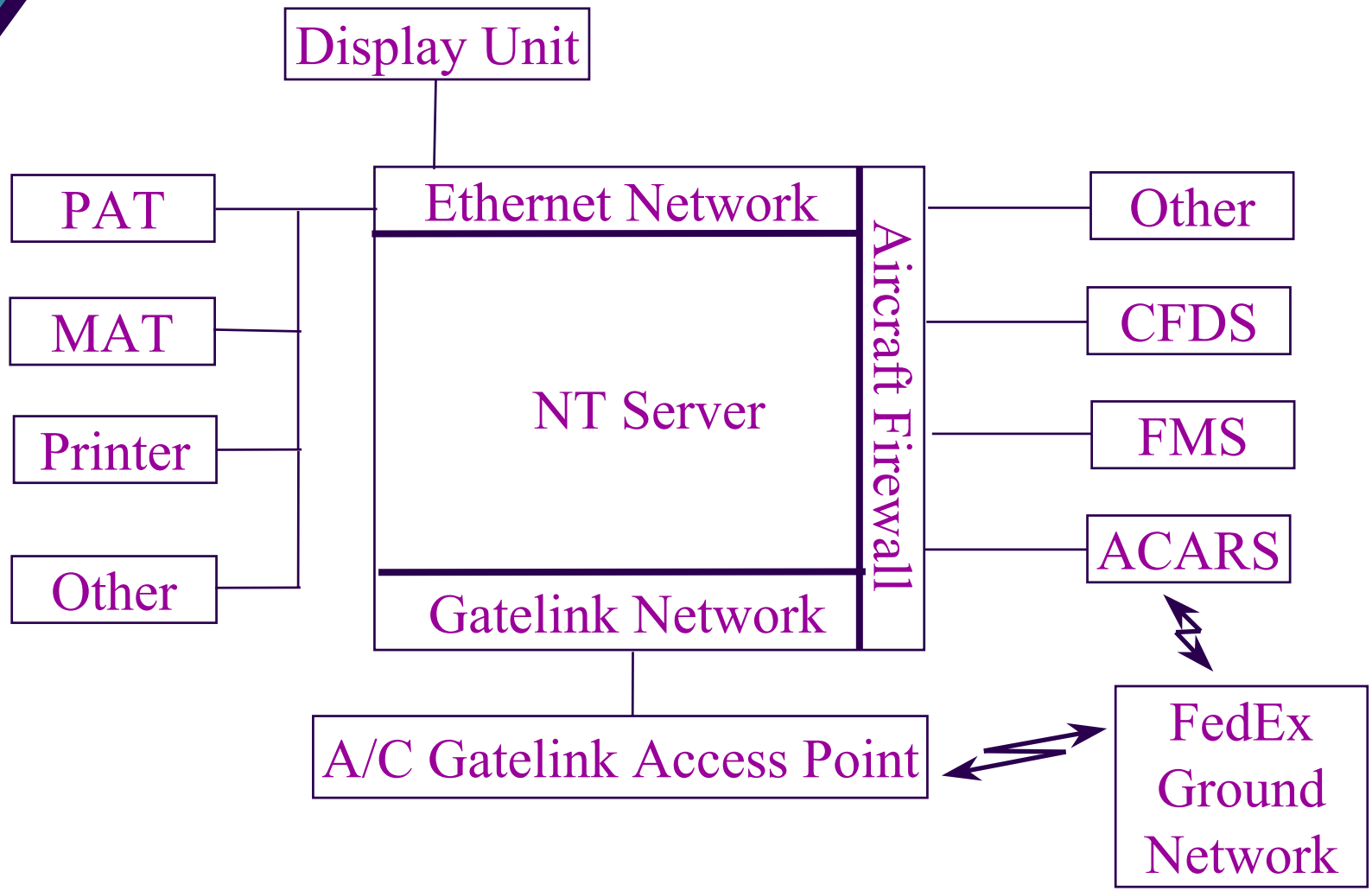
FedEx
Federal Express

The "TITAN" Project

The Titan Project is a cooperative effort between Federal Express and Spirent. The intent of this project is to identify, design, develop and prove the viability of technology based solutions to reduce operating costs and enhance operational efficiency.

Increased utilization of the Airborne Server and Ground Stations, currently supporting the OMT, Gatelink and PAT programs, will be the near term focus of the project!

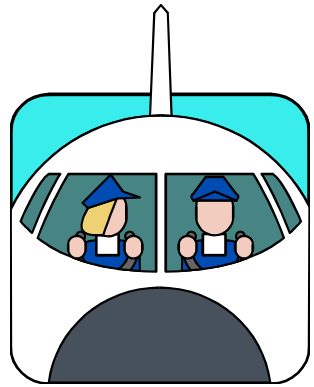
The "TITAN" Project



The "TITAN" Project

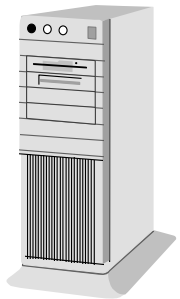
PAT

OMT/Server

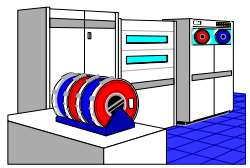


ACARS / Gatelink

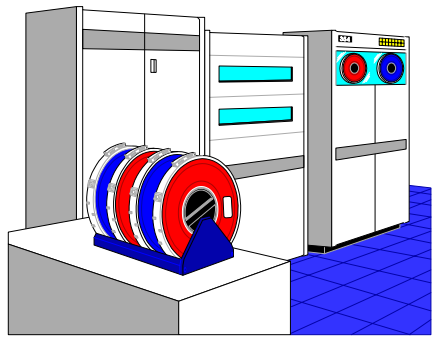
Ground Stations



TITAN Server



Jeppesen Server
Denver / Frankfort

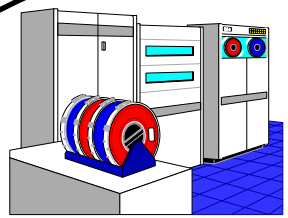


Maxi Merlin

The "TITAN" Project

Outside Data Suppliers (Jouve, etc.)

TECH PUBS



Maxi Merlin

- GOCC
- MOCC

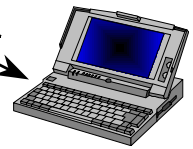
Enroute
- ACARS
- Weather
- Fault Codes
- Pilot Reports
- Deck Tips

Data Repository
TITAN Server

- MAXI TERMINAL
- PAT
- OMT

- PAT
- OMT

AMADS/VISION



Heavy Maintenance

- Description and Operation
- Location/Assembly Drawings
- Maintenance Data and Practices
- Tech Tips

- Jeppesen & Airport Facilities
- Flight Manual
- MEL/CDL
- Electronic Log Book

Line Maintenance

Relationship to other Projects

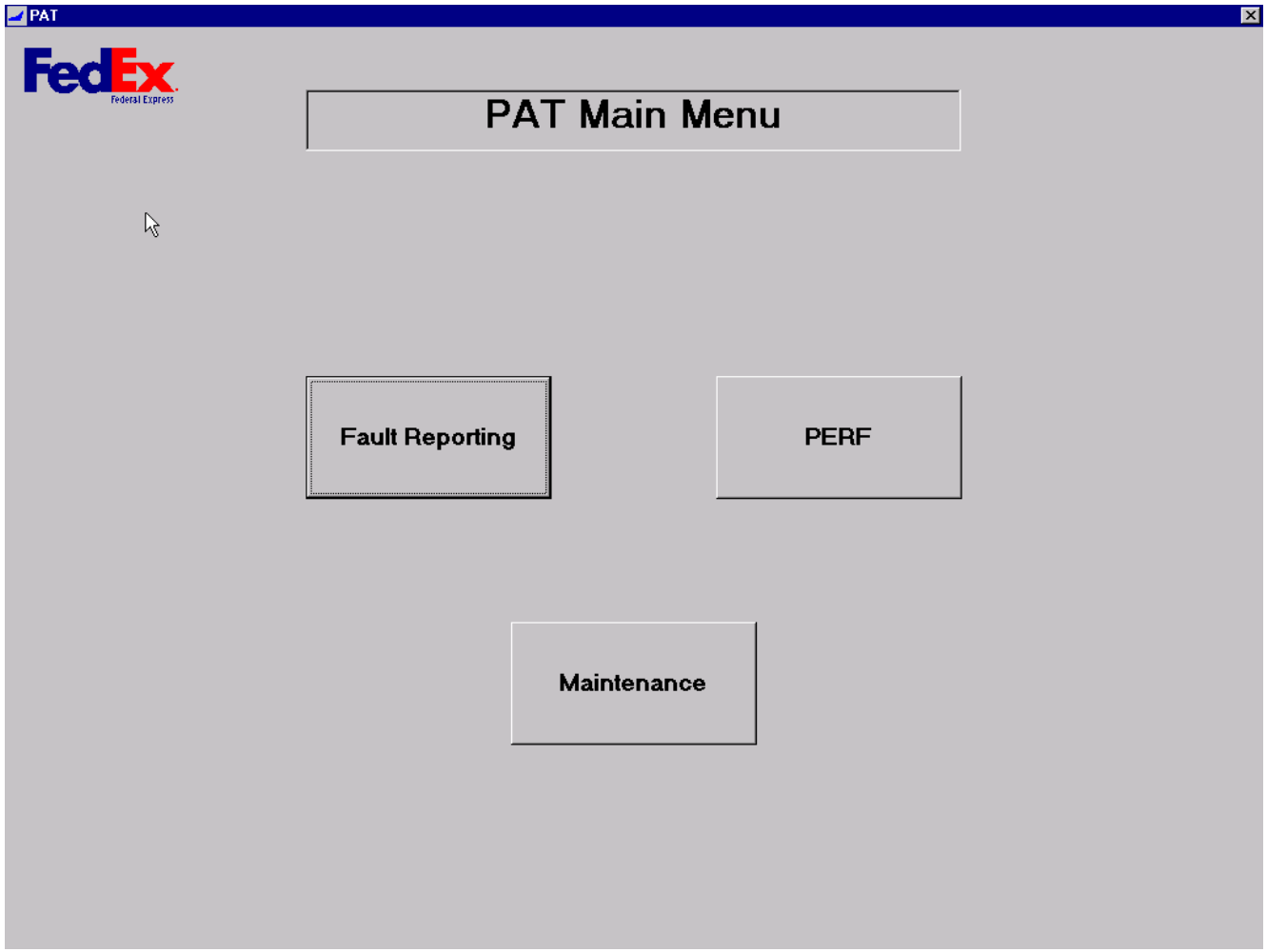
- Uses full format wide carriage ACARS Printer
- Supports electronic manuals onboard A/C
- Hosts the APLC software, with redundancy
- Ground Gatelink Access Point project
- Strongly supports the Early Alert Program (EAP)
- Will support electronic logbook philosophy
- Accurate crew write-ups, which supports reliability Goals
- Automated entry into Maxi Merlin
- Can be incorporated into VISION, AMADS, and OMNI
- Collect Flight Data Recorder data (FOQA program)

Reasons for TITAN

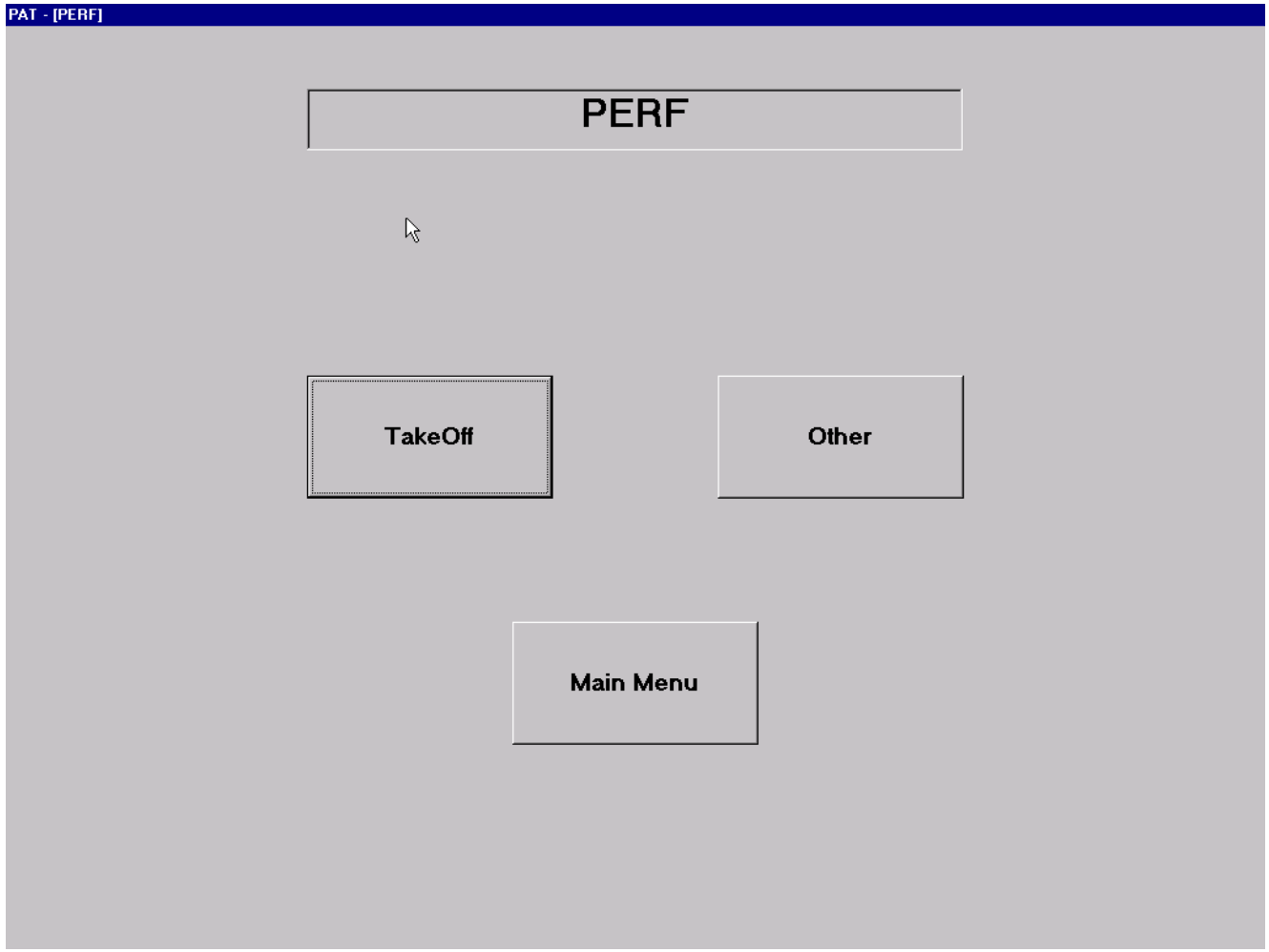
- Replacement of current APLC (performance Laptop)
- Electronic Fault Reporting System
- Access to Server hard drive space (electronic documents/file server)
- Electronic Logbook (virtual paperless cockpit)
- Communications enhancement
- Platform for Electronic Jeppesen

How The PAT Works

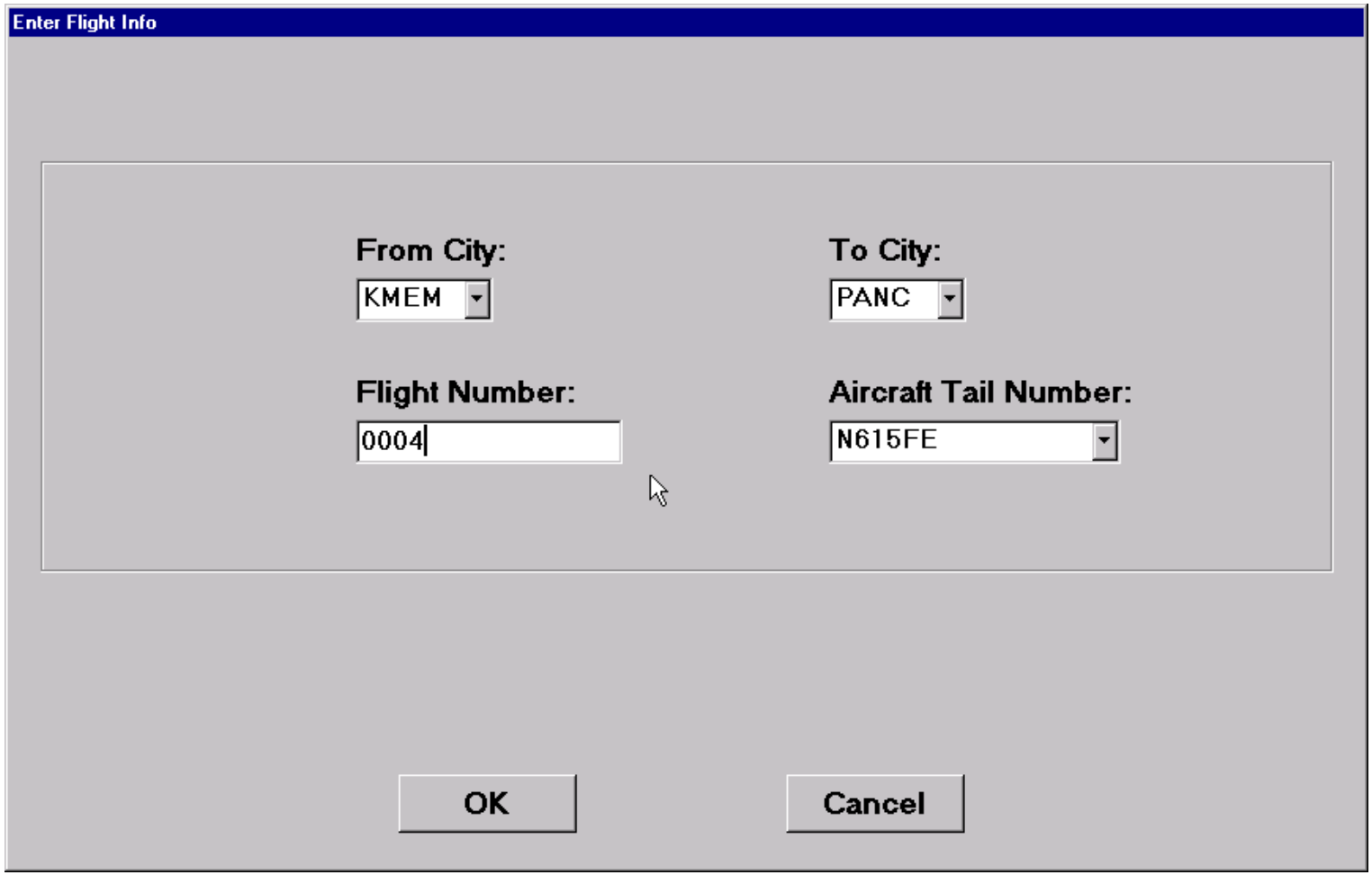
Current PAT Main Menu



PAT PERF Select Screen



Takeoff Input Screen



PAT Fault Reporting Main Screen

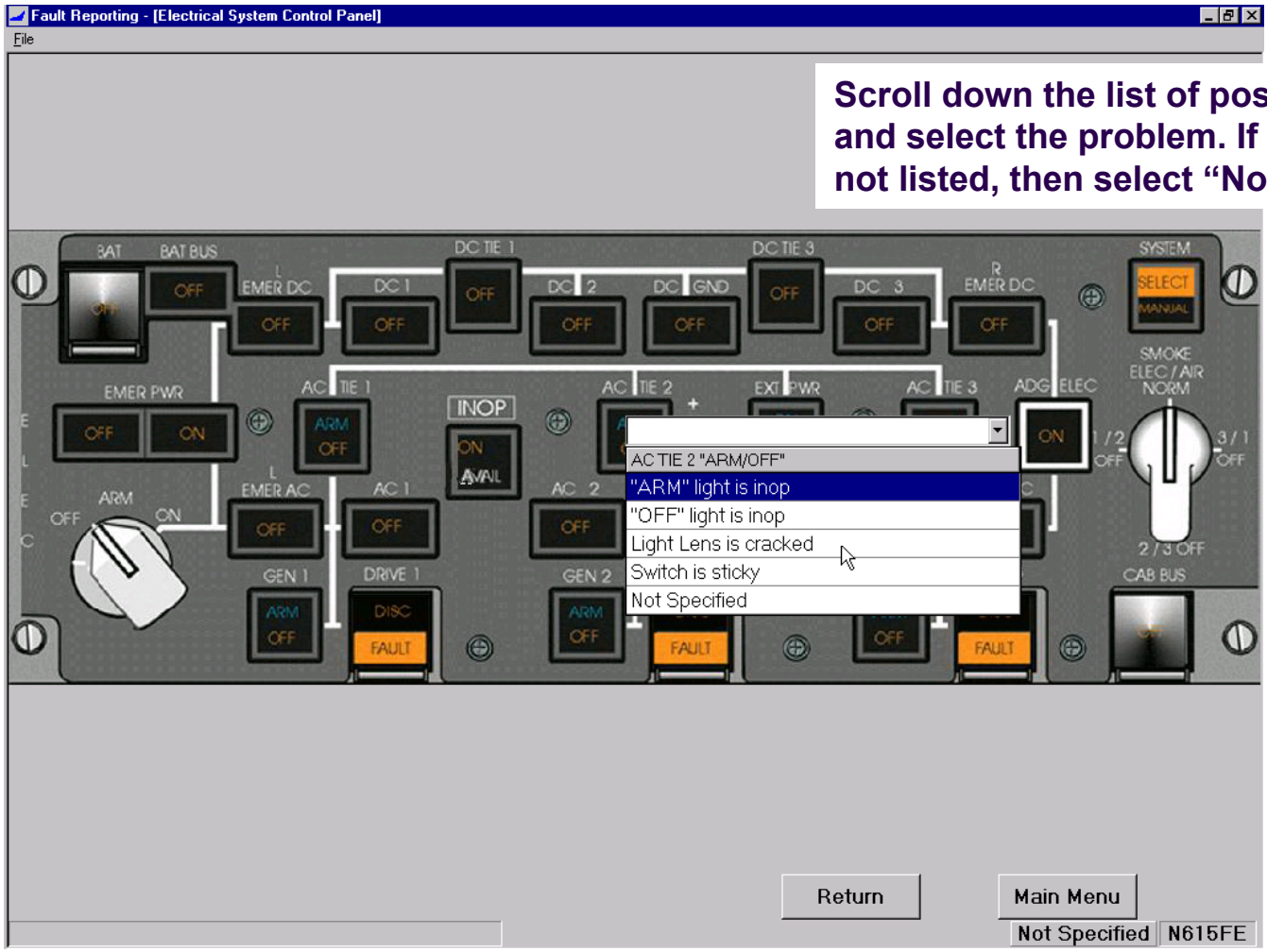
How PAT Fault Reporting works!

From Cockpit Screen Select Area where problem is. (A box will appear around the selected area and the area name will appear in the left bottom corner)

Electrical System Control Panel

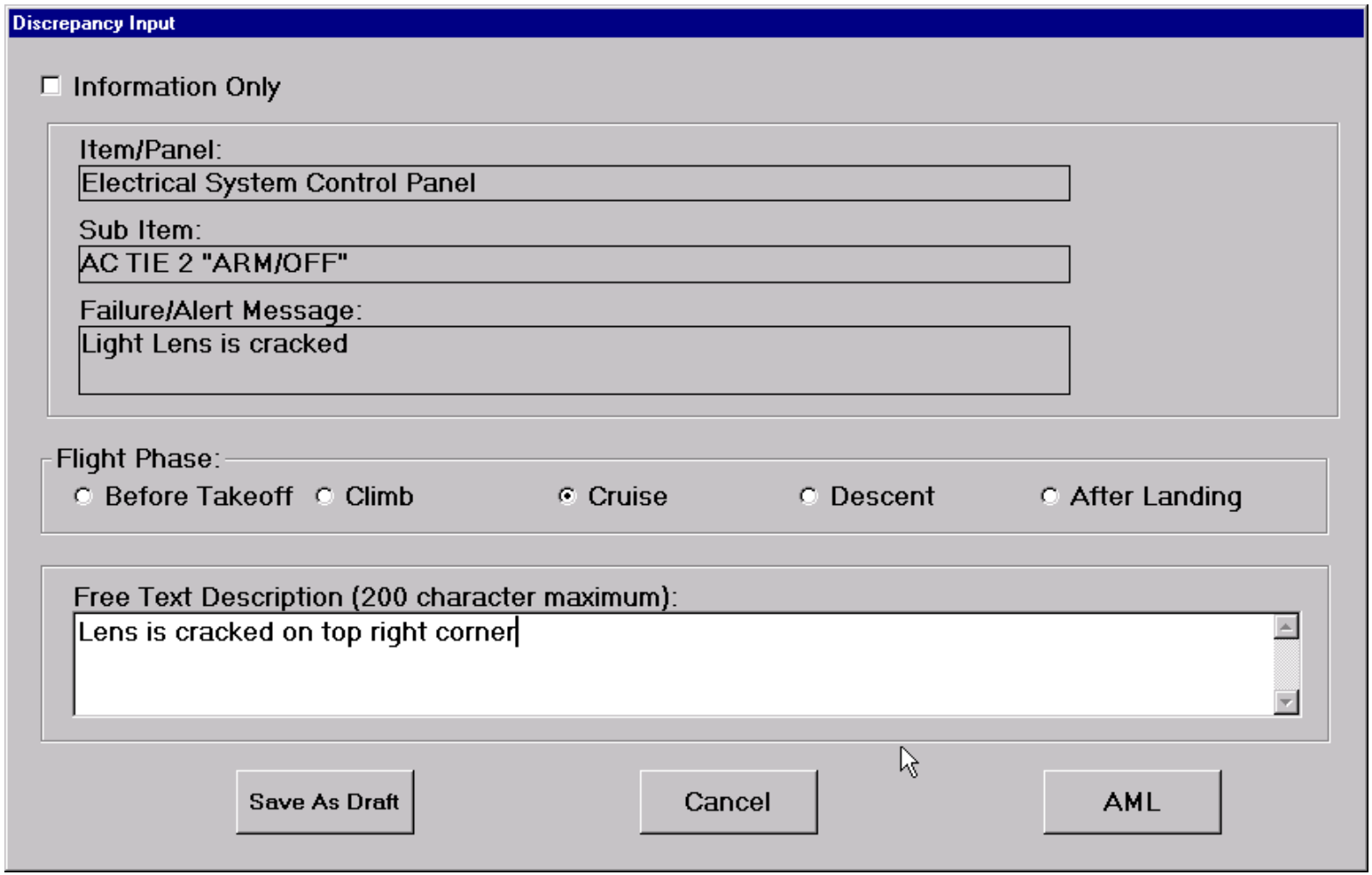
Select failed item. A box will appear around the selected area and the area name will appear in the left bottom corner.

Electrical System Control Panel

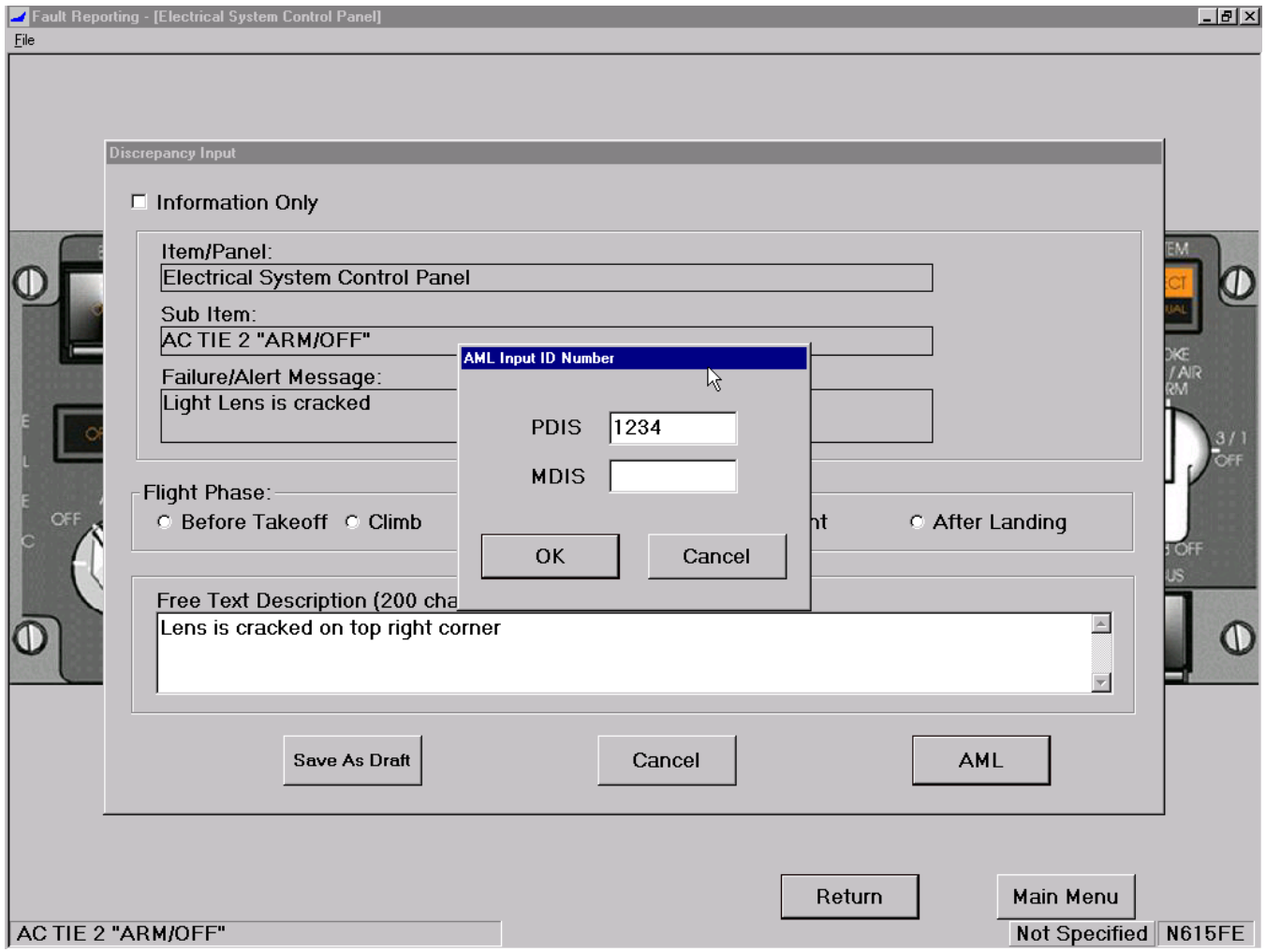


Scroll down the list of possible failures and select the problem. If the problem is not listed, then select “Not Specified”.

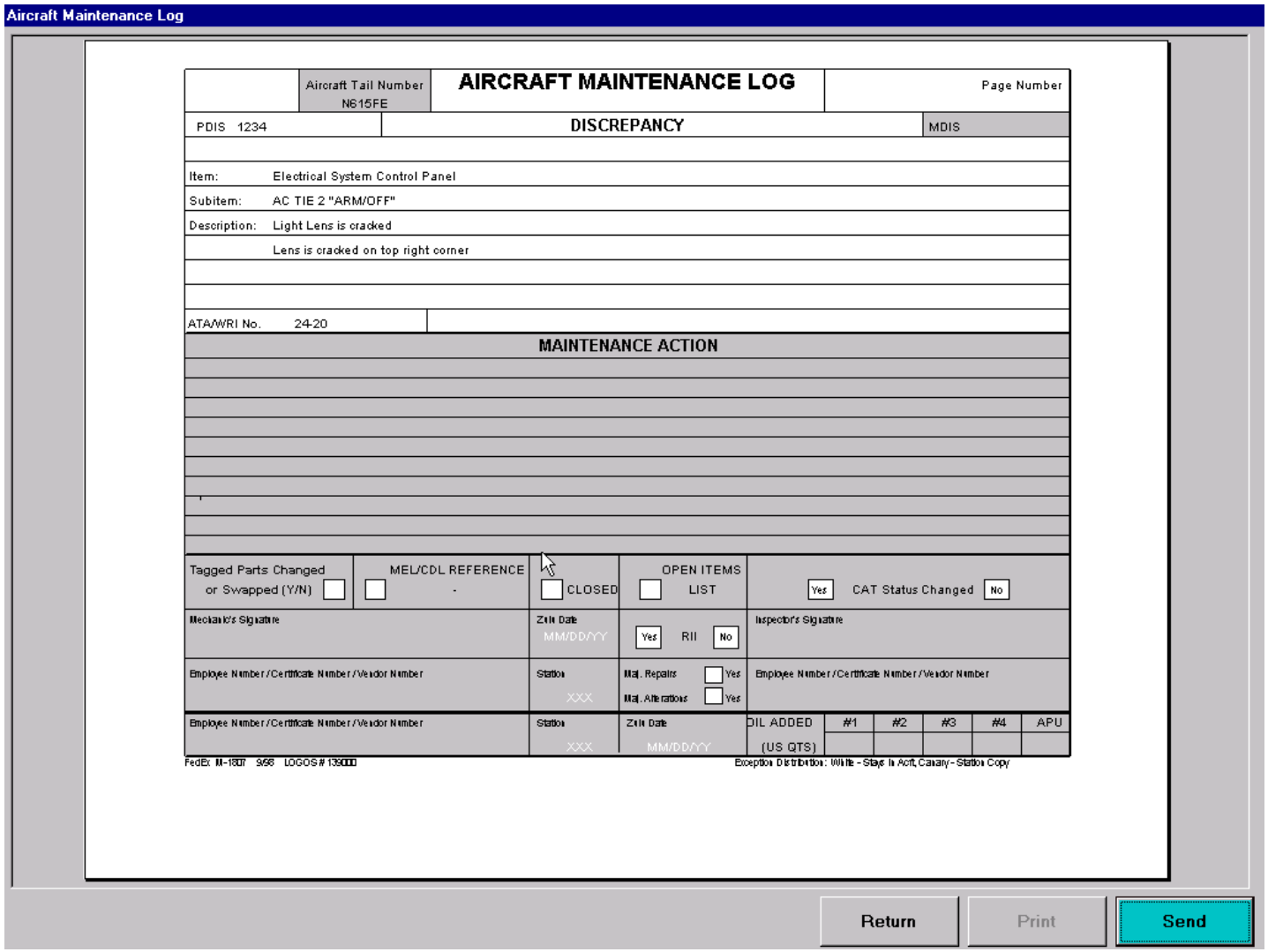
Discrepancy Input Screen



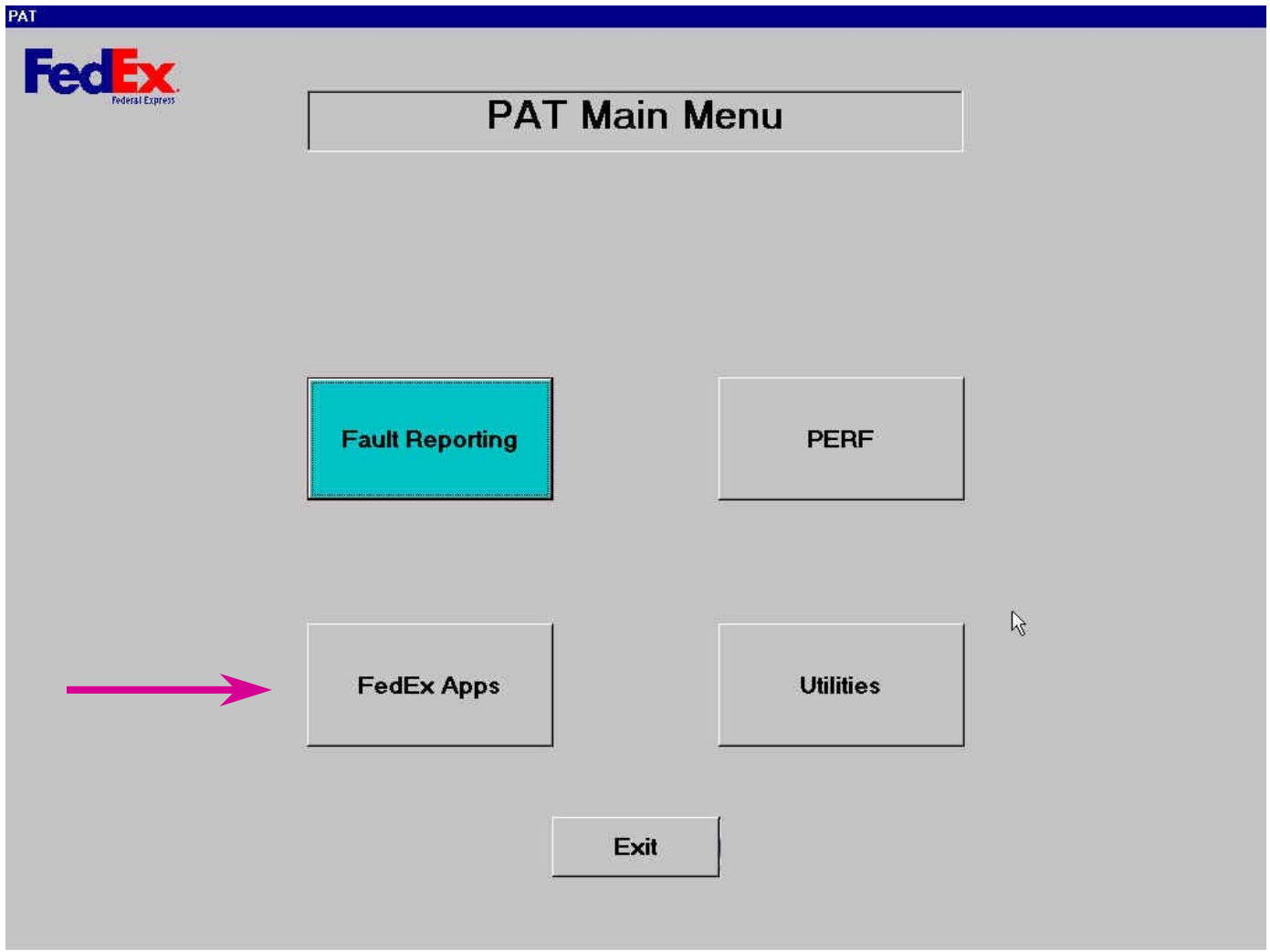
PDIS or MDIS Input Screen



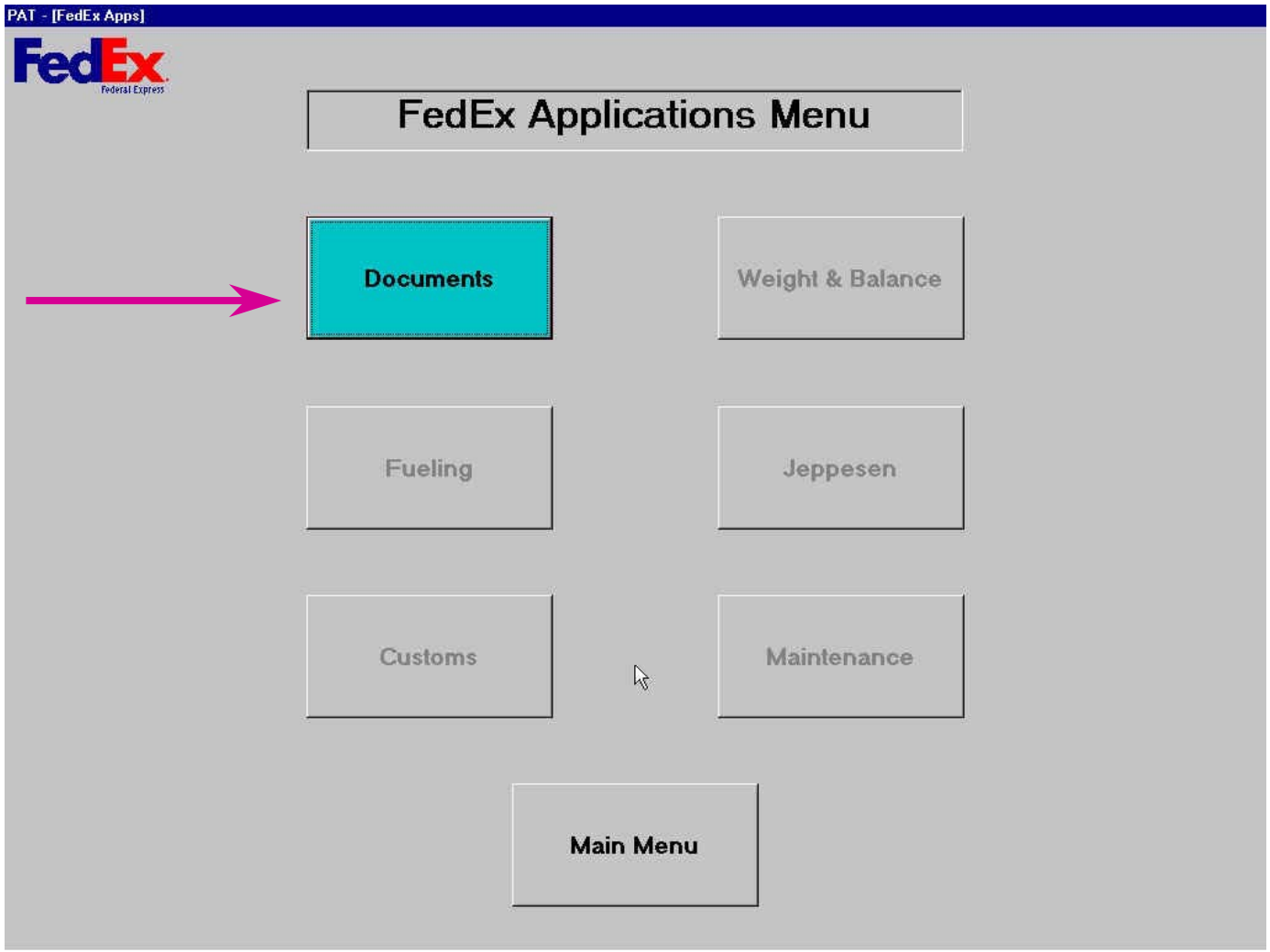
EAML Screen


Aircraft Maintenance Log
Aircraft Tail Number
N615FE
AIRCRAFT MAINTENANCE LOG
Page Number
PDIS 1234
DISCREPANCY
MDIS
Item: Electrical System Control Panel
Subitem: AC TIE 2 "ARM/OFF"
Description: Light Lens is cracked
Lens is cracked on top right corner
ATA/WRI No. 24-20
MAINTENANCE ACTION
Tagged Parts Changed or Swapped (Y/N)
MEL/CDL REFERENCE
CLOSED
OPEN ITEMS LIST
Yes
CAT Status Changed
No
Mechanic's Signature
Zulu Date MM/DD/YY
Yes
RII
No
Inspector's Signature
Employee Number/Certificate Number/Vendor Number
Station XXX
Maj. Repairs Yes
Maj. Alterations Yes
Employee Number/Certificate Number/Vendor Number
Employee Number/Certificate Number/Vendor Number
Station XXX
Zulu Date MM/DD/YY
OIL ADDED (US QTS)
#1
#2
#3
#4
APU
FedEx M-1807 9/98 LOGOS # 139000
Exception Distribution: White - Stays In Acft, Canary - Station Copy
Return
Print
Send

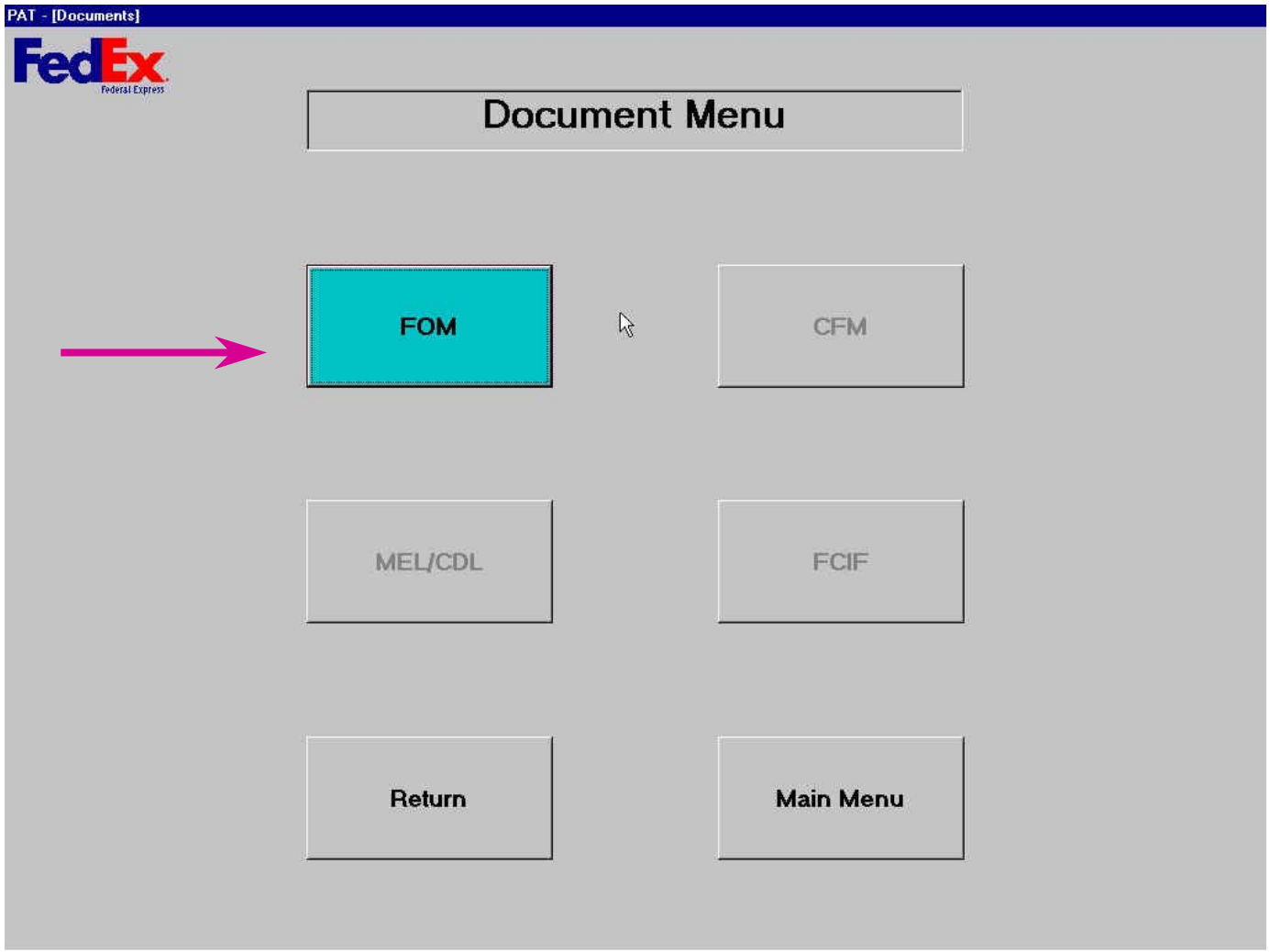
New PAT Main Menu



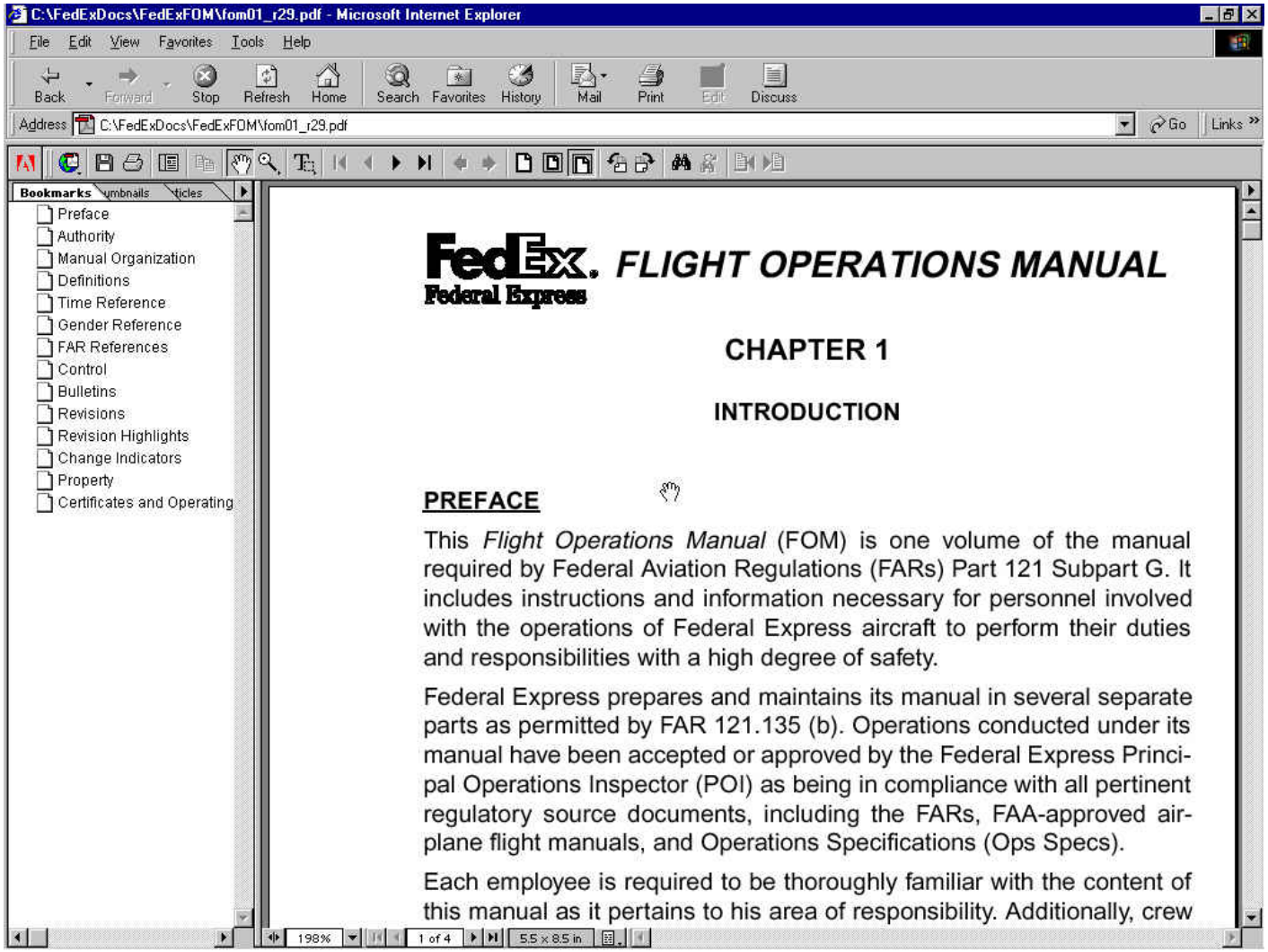
Additional PAT Applications



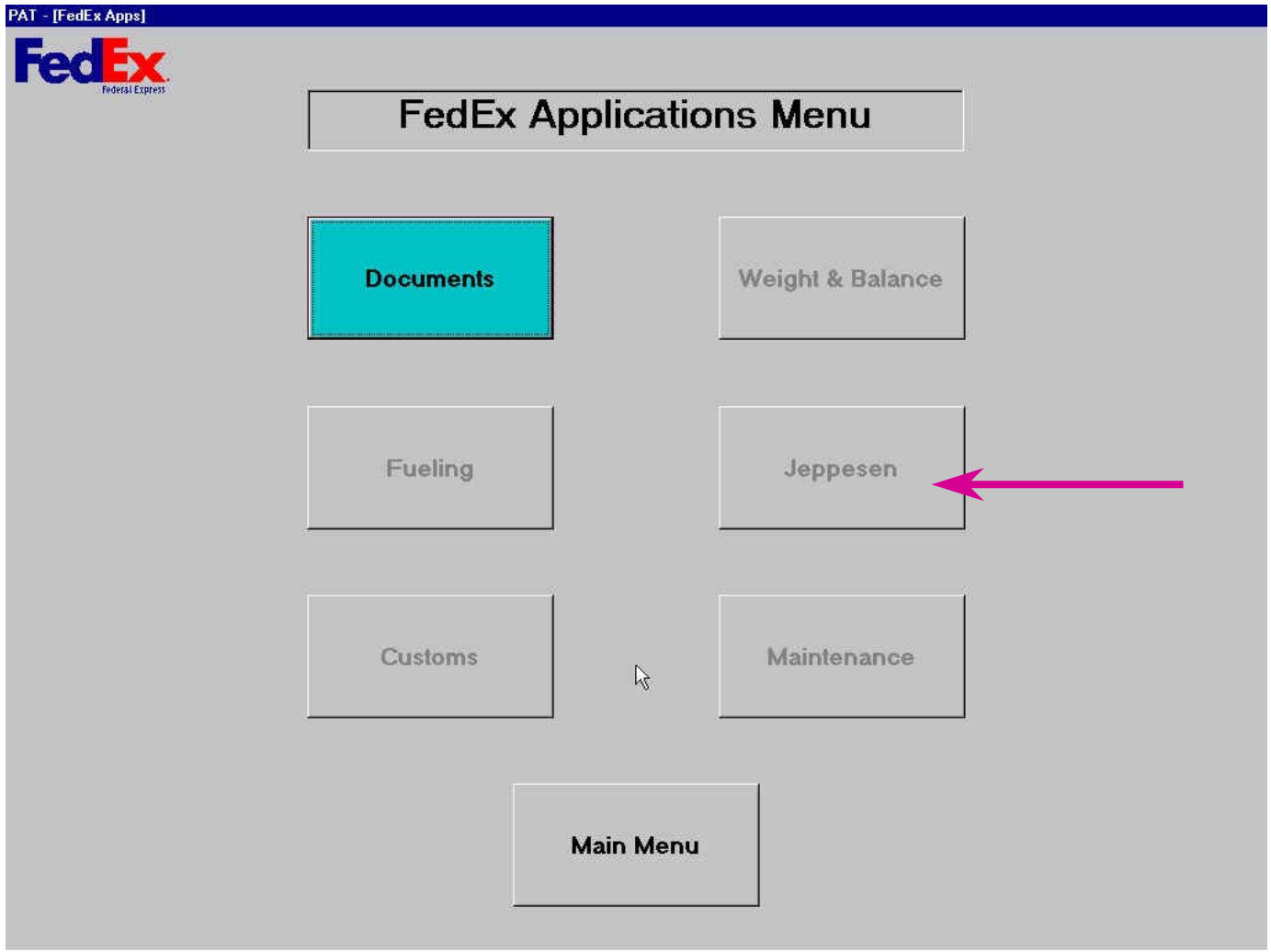
Flight Operations Manual



Flight Operations Manual



Jeppesen "JEPPVIEW" Screens



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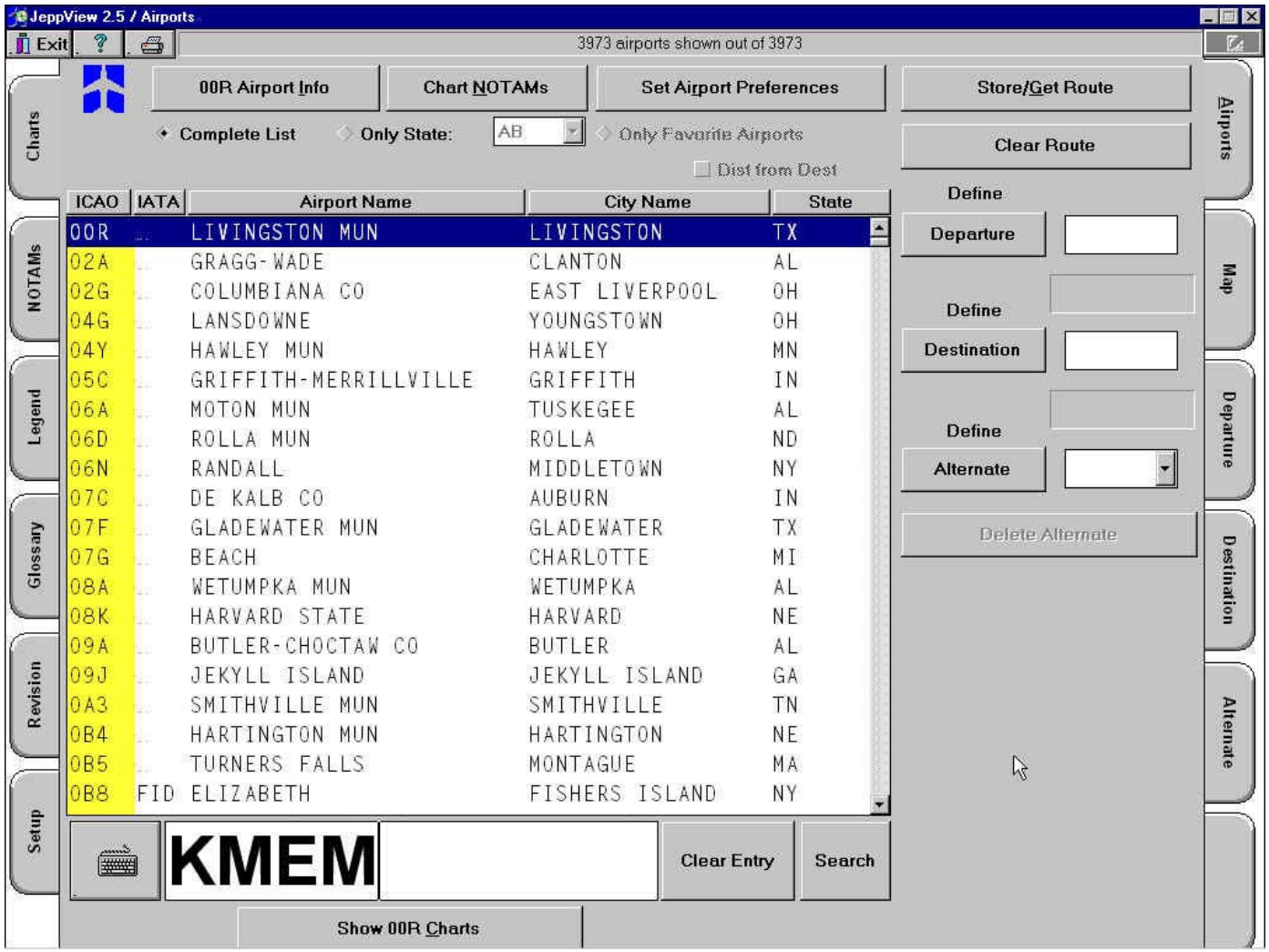

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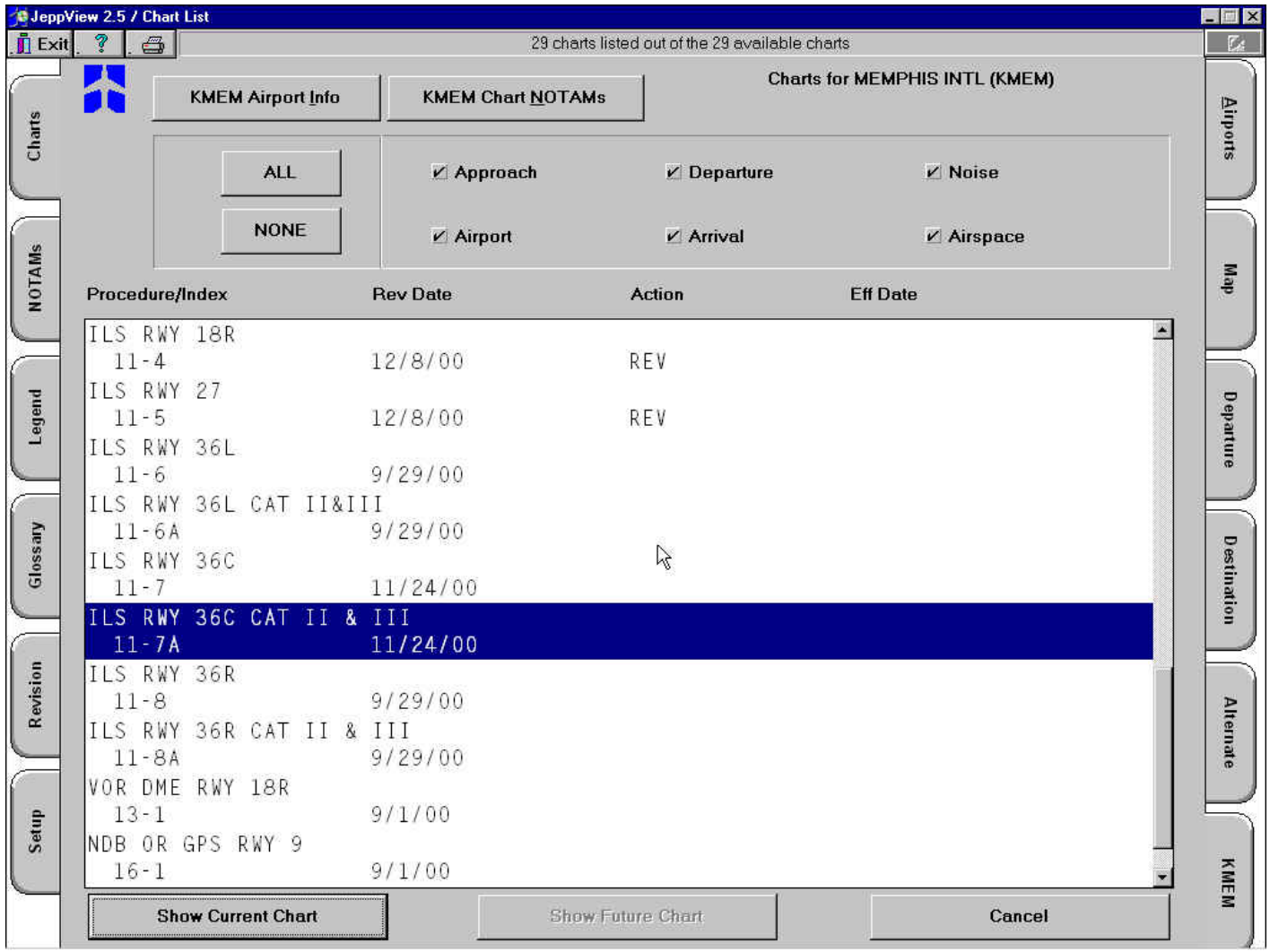

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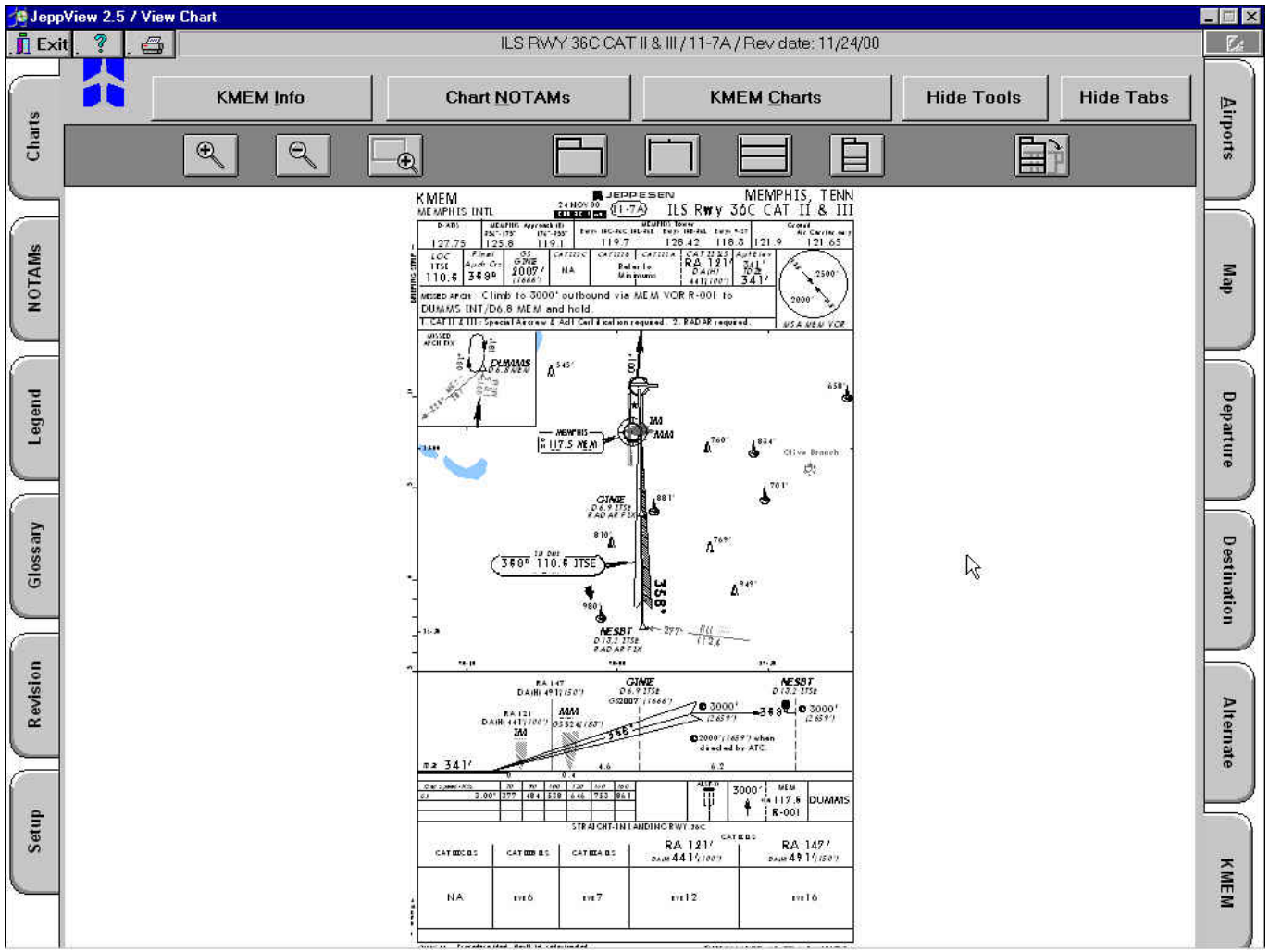

Results!!

- Message will get sent to the ground via ACARS.
- MOCC and down line station get the message and will know exactly what the pilot will be writing up.
- Mocc and mechanics will check OMT for faults related to Pilot report and prepare for troubleshooting.
- Bottom Line : **NO SURPRIZES!!!!!!!!**
- *Viewing and printing of Jeppesen Charts.*
- *Platform for several other applications!*